BACKGROUND

- The acute and chronic consequences of hepatitis B virus (HBV) infection are major health problems.

- The Centers for Disease Control and Prevention (CDC) estimates **200,000-300,000** new HBV infections occur each year in the U.S.

- Approximately **1-1.25 million** persons have **chronic HBV** in the U.S. and are potentially infectious to others.

- Many chronically infected persons are at risk of long-term sequelae such as **chronic liver disease** and **liver cancer**. Each year, approximately **4,000-5,000** of these persons die from **chronic liver disease**.

- At least **50%** of persons who become infected have no symptoms and may not know they have it and yet may be able to infect others. Even if people have symptoms, unless they have jaundice, the symptoms are flu-like (fatigue, abdominal pain, joint pain, and loss of appetite).

- Of the approximately four million births in the U.S. each year, an estimated **19,000** occur to HBV-infected women. Unless these infants receive appropriate post-exposure prophylaxis, transmission of HBV from their mothers results in up to **90%** of these infants becoming infected; of those infected, **90%** will become **chronic carriers**. Up to **25%** of the infants who become chronically infected will die from **primary hepatocellular carcinoma** or **cirrhosis** of the liver, usually as adults.

- Immunization with hepatitis B vaccine is the most effective way to prevent HBV infection. **Perinatal transmission** of HBV can usually be prevented if HBsAg-positive pregnant women are *identified* and their infants receive appropriate post-exposure prophylaxis, which consists of hepatitis B immune globulin (HBIG) *and* hepatitis B vaccine, shortly after birth, followed by additional doses of vaccine at 1-2 months and 6 months of age for full protection. CDC recommends testing <u>all</u> pregnant women for HBV early in <u>each</u> pregnancy. Once a person is infected with HBV, hepatitis B vaccine will not help him/her.

- In late 1989, the Washington State Department of Health (DOH) received grant funds from CDC to establish a perinatal hepatitis B prevention program. Such a program exists in all states and several U.S. territories.

PROGRAM GOAL AND OBJECTIVES

The Perinatal Hepatitis B Prevention Program's overall goal is ***to reduce the incidence of hepatitis B in infants born to infected (HBsAg-positive) mothers***. Achievement of this goal involves **identifying HBsAg-positive pregnant women** and their **household/sexual contacts** *and* **establishing an effective follow-up system to assure that infants born to HBsAg-positive mothers receive appropriate post-exposure prophylaxis and susceptible contacts receive a three-dose series of hepatitis B vaccine**. Appropriate post-exposure prophylaxis for these infants includes hepatitis B immune globulin (HBIG) and hepatitis B vaccine, shortly after birth, followed by 2 additional doses of vaccine (at 1-2 months and 6 months of age).

Objectives to attain this goal include:

- Assure that at least **100%** of all pregnant women who deliver are screened for HBsAg prenatally or at delivery.

- Assure that **95%** of expected births to HBsAg-positive mothers are identified.

- Assure that at least **95%** of infants born to identified HBsAg-positive mothers receive hepatitis B immune globulin (HBIG) *and* Dose #1 of hepatitis B vaccine within 7 days of birth *and* complete the 3-dose hepatitis B vaccine series by 6-8 months of age.

- Assure that at least **90%** of *susceptible* sexual partner(s) and household contacts of identified HBsAg-positive pregnant women complete the 3-dose hepatitis B vaccine series.

GUIDELINES FOR PEDIATRIC CARE PROVIDERS

Infants born to HBsAg-positive mothers are at high risk of acquiring the infection themselves, becoming chronic carriers, and developing serious sequelae later in life unless they receive appropriate prophylaxis.

1. The Advisory Committee on Immunization Practices (ACIP) recommends that infants born to HBsAg-positive mothers receive the following:

   ✓HBIG and hepatitis B vaccine within 12 hours of birth
   ✓Hepatitis B vaccine dose #2 at 1-2 months of age
   ✓Hepatitis B vaccine dose #3 at 6 months of age
   ✓Post-vaccine screening including both HBsAg and anti-HBs (or HBsAb) at 9-15 months of age

2. Local health jurisdiction staff provide case management services to the family in order to assure that the infant and household contacts receive appropriate hepatitis B vaccination and testing.
3. It is imperative that infants born to HBsAg-positive mothers receive the third dose be given at **6 months of age**. This is a stringent schedule to prevent infection.
4. Infants born to HBsAg-positive mothers need to receive post-vaccine screening at 9-15 months of age. Educate and encourage the parents about the importance of this screening that determines if the infant has developed antibodies or has become infected. To reduce the stress related with this blood draw, write an order for the blood testing and send the infant to a phlebotomist with experience in pediatric blood draws. Notify the local health jurisdiction of the post-vaccination screening and fax the lab results to the local health jurisdiction.

Provider Checklist for Infants Born to HBsAg-Positive Mothers

Name of Mother_____
DOB__/__/__

Name of Infant_____
DOB__/__/__

Chart/ID Number_____

❑ HBIG and hepatitis B vaccine dose #1 *recommended within 12 hours of birth*
Date given: __/__/__

❑ Hepatitis B vaccine dose #2 *recommended at 1 month of age*
Date given: __/__/__

❑ Hepatitis B vaccine dose #3 *recommended at 6 months of age*
Date given: __/__/__

❑ HBsAg and anti-HBs (or HBsAb) test recommended at 9-15 months of age
Date given: __/__/__

Washington State Department of Health